

# RC CAR/DRONE

#### **FEATURING:**

- 1. Four-Rotor design allows great speed and maneuverability for both Indoor and Outdoor use.
- 2. Built-in 6-axis Gyro ensures excellent stability.
- 3. Modular design for increased ease of maintenance.
- 4. 360-degree 3-dimensional stunt and tumbling function

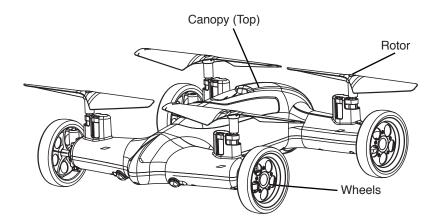
The materials and specifications stated in this instruction manual are for reference only.

# Pilot's Handbook for TERRACOPTER RC CAR/DRONE

Thank you for your purchase of Protocol's **TerraCopter RC Car/Drone.**You are about to experience the best of what remote control flight has to offer. We strongly recommend that you take the time to read this manual thoroughly. It contains many tips and instructions on how to get the most out of this aircraft and maintain it for a long life.

As with any aircraft, this is a precision flying machine. Treat it well and enjoy all the fun it has to offer, flight after flight.

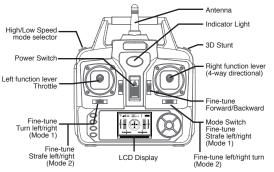
# **SCHEMATIC**

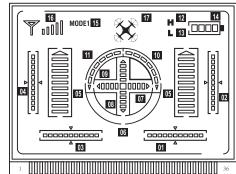


## SAFETY AND PRECAUTIONS

- 1. Keep small parts out of reach of children to avoid accidents.
- 2. The quad-copter is powerful and fast; accelerate gently to avoid damage and accidents.
- 3. After flying, disconnect the battery.
- 4. Keep the battery away from heat sources and / or fire.
- Keep the quad-copter at a distance of at least 2 meters from yourself, others, and obstacles to prevent damage.
- 6. Children should operate the quad-copter only under adult supervision.
- The remote controller batteries can not be recharged. Do not mix new batteries with old batteries or mix batteries of different types.
- 8. Always turn off both the transmitter and quad-copter when not in use.
- 9. Never attempt to short-circuit the battery terminals or the quad-copter.

# REMOTE CONTROL KEYPAD AND LCD MANUAL





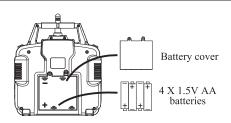
#### Remote Control Keypad and LCD Manual

- 01. Fine-tuning: Side-to-side Strafing [defaults to center on start-up]
- 02. Fine-tuning: Forward/Backward [defaults to center on start-up]
- 03. Fine-tuning: Turn Left/Right [defaults to center on start-up]
- 04. Fine-tuning: Throttle [defaults to center on start-up]
- 05. Throttle [defaults to zero on start-up]
- 06. Directional Display [defaults to center on start-up]
- 07. Lateral Movement to Right
- 08. Rearward Movement
- 09. Lateral movement to Left
- 10. Right rotational movement [defaults to zero on start-up]
- 11. Left rotational movement [defaults to zero on start-up]
- 12. High Speed Mode Active
- 13. Low Speed Mode Active
- 14. Controller Battery Level Indicator
- 15. Flight Mode 1 Active (Default); To change to Mode 2, press and hold Mode Switch to the right while turning on the transmitter.
- 16. Remote control signal strength
- Indicates positive communication lock with the TerraCopter

# **BATTERY INSTALLATION**

#### Remote Control



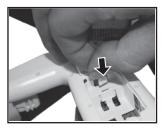


Unscrew and remove battery cover from R/C unit, insert 4 'AA' batteries, noting polarity indicators. Replace battery cover.



- 1. Install batteries carefully.
- 2. Do not mix old and new batteries.
- 3. Do not mix different types of batteries.

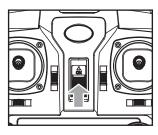
# **FLYING THE QUADCOPTER**



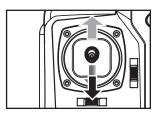
Step 1: Open the battery cover and insert the battery into the power port.



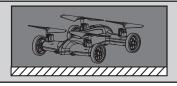
Step 2: Close the battery cover and turn on the quad-copter.



Step 3: Push the ON/OFF power switch up.



Step 4: Push the throttle lever to the highest position, and then pull it back to the lowest position. There will be two beeps from the transmitter. This shows that the quad-copter has synced with the remote.



Tips: When syncing your quad-copter keep it in a horizontal position for stable flight.

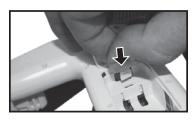
# NOTE

- If the TerraCopter and the remote do not sync after following the Pre-Flight checklist, reverse the first two steps of the process. Turn the remote and the TerraCopter off. Then, turn on the remote first and then the Terracopter. Follow with Step 4.
- 2. Turn on the controller; if, after 30 seconds, it has not recognized the drone, turn off controller to retry synchronization.
- 3. If quad-copter's LED blinks slowly, it means it has not recognized the controller; please restart pre-flight procedure.
- 4. If the TerraCopter is unsteady in flight, it may not have been able to calibrate horizontally; Power down both vehicle and remote and restart pre-flight procedure.

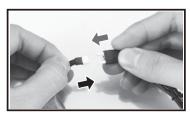
# CHARGING THE QUAD-COPTER BATTERY



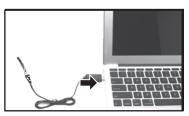
1. Push the on/off switch of the quad-copter to OFF and open the battery cover.



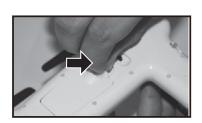
2. Pull out the battery wire from the power port.



3. Connect the USB charging cable to the battery wire.



4. Plug the charger into a USB port. The USB will light up while charging and will turn off once fully charged.



5. Reconnect the battery wire to the power port and close the battery cover.

Charging time: approximately 100 minutes -- Flying time: approximately 5 minutes

# **CAUTION WHEN CHARGING**

- When charging, place product on a dry, well-ventilated surface and keep away from heat sources.
- 2. Always use adult supervision while charging.
- As battery temperature is high immediately after flight, charge after cooling down for higher efficiency.
- 4. Do not strike or subject battery to hard impacts or sharp surfaces.
- 5. Do not use any other charger than that which is supplied with this item.
- 6. Do not use or leave battery near a heat source such as fire or space heater; exposure to heat may result in reduced performance or in some cases dangerous conditions.
- 7. If battery is left in charging state for an extended period of time after being fully charged, the battery may automatically discharge.
- 8. Never leave the battery unattended during charging.

# **BATTERY REPAIR & MAINTENANCE**

- 1. Do not immerse or submerge battery in water; store in a cool, dry location.
- 2. In order to increase battery longevity, avoid repeat charging and excessive discharging.
- 3. Charge battery to approximately 55% capacity prior to long-term storage.
- 4. If battery sees no use for extended periods of time, it is recommended that battery voltage is kept above 3V. Check monthly and recharge as needed.
- 5. Do not disassemble battery.

# **HIGH-LOW SPEED MODES**

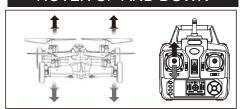
The TerraCopter features 2 speed modes. Low speed is for beginners and high speed is for advance users.

Press the speed mode button to adjust speed.



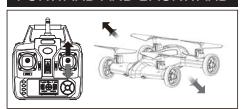
# **OPERATION (MODE 1)**

### HOVER UP AND DOWN



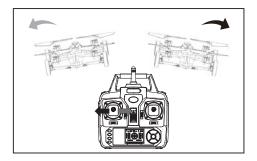
Push the throttle up or down, the quadcopter flies upward or downward.

## FORWARD AND BACKWARD



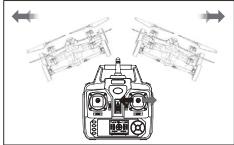
Push the direction lever up or down, the quad-copter flies forward or backward.

## **TURNING LEFT AND RIGHT**



Pull the throttle left or right, the quadcopter turns to the left or right.

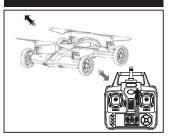
## SIDEWAYS FLIGHT



Pull the direction left to the left or right, the quad-copter banks to the left or right.

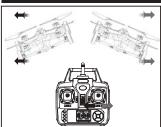
## TRIM ADJUSTMENT

#### FORWARD/BACKWARD TRIM



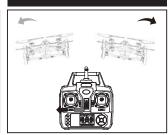
When the quad-copter veers forward/backward unintentionally, you can correct it by pressing the trim button in the opposite direction until it evens out.

#### SIDEWAYS TRIM



When the quad-copter veers to the left or right side unintentionally, you can correct it by pressing the trim button in the opposite direction until it evens out.

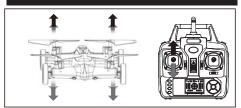
#### LEFT/RIGHT TRIM



When the quad-copter keeps spinning left or right unintentionally, you can correct it by pressing the trim button in the opposite direction until it evens out.

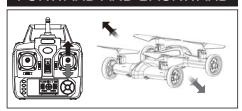
# **OPERATION (MODE 2)**

## **HOVER UP AND DOWN**



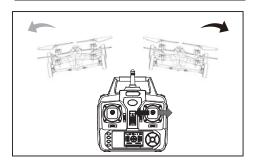
Push the throttle up or down, the quadcopter flies upward or downward.

## FORWARD AND BACKWARD



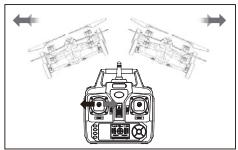
Push the direction lever up or down, the quad-copter flies forward or backward.

## **TURNING LEFT AND RIGHT**



Pull the direction stick left or right, the quad-copter turns to the left or right.

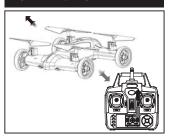
## SIDEWAYS FLIGHT



Pull the throttle left to the left or right, the quad-copter banks to the left or right.

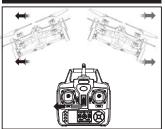
## TRIM ADJUSTMENT

#### FORWARD/BACKWARD TRIM



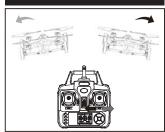
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#### SIDEWAYS TRIM



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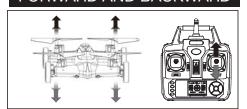
#### LEFT/RIGHT TRIM



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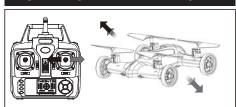
## **DRIVING THE TERRACOPTER**

## FORWARD AND BACKWARD



When the drone is on land, push the direction lever up or down to fly forward or backward.

## TURNING LEFT AND RIGHT



When the drone is on land, push the right direction lever left or right to turn left or right.

# **TROUBLESHOOTING**

Symptom	Possible Cause	Potential Solution	
TerraCopter does not respond	Communication between controller and aircraft was not synchronized during set up     Battery power depleted on aircraft, controller or both.	To synchronize, turn on controller, then turn on aircraft and place it on level ground. Move throttle stick all the way forward, then all the way back.  Charge aircraft and/or replace batteries in controller.	
Response to control inputs intermittent or erratic	Controller battery power nearly depleted.	Replace batteries in controller.	

Symptom	Possible Cause	Potential Solution
TerraCopter will not hover or strafe correctly	The aircraft was not on level ground during synchronization.	Re-synchronize aircraft and controller.
	2. Trim settings are incorrect.	Reset the trim buttons on the controller and re-trim flight controls.

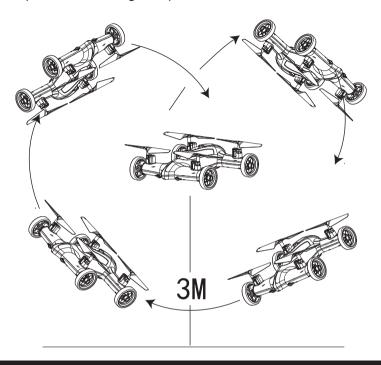
#### Restart function:

In case of flight disorder, restore factory default settings by the following methods:

- 1. Press the power switch to turn on the transmitter.
- 2. Press the power switch to turn on the quad-copter.
- When the quad-copter indicator flashes slowly, push the throttle lever to the highest position, and then pull it back to the lowest position. The quad-copter indicator will change from slow flashing to steady mode.
- 4. Place the quad-copter on a horizontal position, then push both left and right lever on the transmitter to the lowest right corners for 2-3 seconds. The indicator on the quad-copter will change from normal light to quick flashing light. After 2-3 seconds the indicator will change back to the normal light. This means the quad-copter has restarted/reset successfully.

# TIPS ON 3D STUNT & TUMBLING OPERATION

Once you are familiar with the basics of quad-copter flight, you can try some advanced maneuvers! At a height of at least 10 feet, press and hold the STUNT button [on controller's right side] then move the right stick in whichever direction desired to perform a 360-degree flip in that direction.



## **Replacement Parts:**

Thank you for your purchase of Protocol's **TerraCopter RC Car/Drone.** We know that accidents can sometimes happen and that is why we offer spare parts kits on our website: **ProtocolNY.com.** 

## **Limited Warranty:**

At Protocol, we're dedicated to bringing you innovative and well-designed products that make living fun and easy. We stand behind all of our products and warrant this to be free from defects in workmanship and materials for 30 days from the date of purchase. The warranty does not cover transportation damage, misuse, crashes, accident, or similar events. Specific legal rights pertaining to this warranty may vary by state.

For service claims or questions please consult our website ProtocolNY.com.

